

IN THE CLAIMS:

The following is a complete listing of the claims, reflects all changes currently being made thereto, and replaces all prior versions and listings of claims in the present application:

1. - 25. (Cancelled)

26. (Currently Amended) A light-emitting diode arrangement, comprising:
a light-emitting diode chip;
a multi-layer board having a base of a thermally well-conducting material, the material including a metal, the base being a core of the board and configured for heat dissipation; and
an electrically insulating and thermally conducting connection layer between an emission surface of the light-emitting diode chip and the board, wherein between the light-emitting diode chip and the base of the board there is arranged an intermediate carrier separate from the light-emitting diode chip and the base of the board, the intermediate carrier being electrically contacted with the light-emitting diode chip, and wherein the intermediate carrier includes an aluminum nitride substrate, and wherein there is no electrically conducting layer between overlapping areas of the intermediate carrier and the multi-layer board.

27. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the electrically insulating connection layer is at least a boundary surface of the light-emitting diode chip, which is arranged towards the board.

28. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the electrically insulating connection layer is at least an adhesive layer.

29. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the light-emitting diode chip is accommodated in a depression of the board.

30. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the light-emitting diode chip is arranged in a region of a depression in the base material of the board.

31. (Previously Presented) The light-emitting diode arrangement according to claim 29, wherein the light-emitting diode chip does not project beyond a contour of the board.

32. (Previously Presented) The light-emitting diode arrangement according to claim 29, wherein the light-emitting diode chip ends flush with an upper side of the board.

33. (Previously Presented) The light-emitting diode arrangement according to claim 29, wherein the depression functions as a reflector.

34. (Previously Presented) The light-emitting diode arrangement according to claim 29, wherein the depression includes walls that are at least partially beveled.

35. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the light-emitting diode chip is arranged so that the substrate of the light-emitting diode is towards the board.

36. (Previously Presented) The light-emitting diode arrangement according to claim 35, wherein a substrate of the light-emitting diode chip is of an electrically insulating material.

37. (Previously Presented) The light-emitting diode arrangement according to claim 36, wherein the substrate of the light-emitting diode chip is formed of sapphire.

38. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the light-emitting diode chip is arranged so that a substrate of the light-emitting diode chip is away from the board.

39. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein the light-emitting diode chip is arranged on the intermediate carrier using a conductive adhesive.

40. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein a side of the intermediate carrier towards the board is electrically insulating.

41. (Previously Presented) The light-emitting diode arrangement according to claim 40, wherein a region of the intermediate carrier towards the light-emitting diode chip has conductive regions.

42. (Previously Presented) The light-emitting diode arrangement according to claim 26, wherein at least a region of the light-emitting diode chip is covered by a Fresnel lens.

43. (Currently Amended) The light-emitting diode arrangement according to claim 42, wherein a region between the board and the lens is at least partially filled by a ~~eeleur~~ color conversion material.

44. (Currently Amended) The light-emitting diode arrangement according to claim 43, wherein the ~~eeleur~~ color conversion material is arranged above and alongside the light-emitting diode chip.

45. (Currently Amended) The light-emitting diode arrangement according to claim 26, wherein the light-emitting diode chip is connected to a circuit board using wires, and the circuit board is applied to the multi-layer board using an insulating layer positioned therebetween.

46. (Currently Amended) A light-emitting diode arrangement, comprising:

- a light-emitting diode chip,
- a multi-layer board having a base of a thermally well-conducting layer, the layer including a metal, the base being a core of the board and configured for heat dissipation; and
- an electrically insulating and thermally conducting connection layer between an emission surface of the light-emitting diode chip and the board, wherein between the light-emitting chip and the base of the board there is arranged an intermediate carrier separate from the light-emitting diode chip and the base of the board, the intermediate carrier being electrically contacted with the light-emitting diode chip, and wherein a ~~colour~~ color conversion material is arranged above and alongside the light-emitting diode chip, and wherein there is no electrically conducting layer between overlapping areas of the intermediate carrier and the multi-layer board.

47. (Currently Amended) A light-emitting diode arrangement, comprising:

- a light-emitting diode chip;

a multi-layer board having a base of a thermally well-conducting layer, the layer including a metal, the base being a core of the board and configured for heat dissipation; and

an electrically insulating and thermally conducting connection layer between an emission surface of the light-emitting diode chip and the board, wherein between the light-emitting chip and the base of the board there is arranged an intermediate carrier separate from the light-emitting diode chip and the base of the board, the intermediate carrier being electrically contacted with the light-emitting diode chip, and wherein the light-emitting diode chip is arranged on the intermediate carrier using a conductive adhesive, and wherein there is no electrically conducting layer between overlapping areas of the intermediate carrier and the multi-layer board.

48. to 50. (Cancelled)

51. (Currently Amended) The light-emitting diode arrangement according to claim 26, wherein the electrically insulating and thermally conducting connection layer is arranged between the intermediate carrier and the base of the board, whereby starting from the base of the board, the electrically insulating and thermally conducting connection layer is arranged above the base of the board, the intermediate carrier is arranged above the electrically insulating and thermally conducting connection layer, and the light-emitting diode chip is arranged above the intermediate carrier.

52. (Currently Amended) The light-emitting diode arrangement according to claim 46, wherein the electrically insulating and thermally conducting connection layer is arranged between the intermediate carrier and the base of the board, whereby starting from the base of the board, the electrically insulating and thermally conducting connection layer is arranged above the base of the board, the intermediate carrier is arranged above the electrically insulating and thermally conducting connection layer, and the light-emitting diode chip is arranged above the intermediate carrier.

53. (Currently Amended) The light-emitting diode arrangement according to claim 47, wherein the electrically insulating and thermally conducting connection layer is arranged between the intermediate carrier and the base of the board, whereby starting from the base of the board, the electrically insulating and thermally conducting connection layer is arranged above the base of the board, the intermediate carrier is arranged above the electrically insulating and thermally conducting connection layer, and the light-emitting diode chip is arranged above the intermediate carrier.